

Date: Tue, 23 Aug 94 04:30:32 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V94 #234
To: Ham-Space

Ham-Space Digest Tue, 23 Aug 94 Volume 94 : Issue 234

Today's Topics:

 Northeast Space Development Conference
 Portable EME Station -- Questions
 UoSAT-3
 Yaesu 2 Meter All-Mode for Sale

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 22 Aug 1994 21:54:52 GMT
From: ihnp4.ucsd.edu!swrinde!howland.reston.ans.net!europa.eng.gtefsd.com!
uhog.mit.edu!news.kei.com!ub!freenet.buffalo.edu!ai181@network.ucsd.edu
Subject: Northeast Space Development Conference
To: ham-space@ucsd.edu

YOU ARE INVITED TO THE PREMIER SPACE CONFERENCE EVENT
IN THE NORTHEAST FOR FALL 1994!

The Northeast Space Development Conference is scheduled for
Saturday, September 24, 1994. It will be held on the campus
of Rensselaer Polytechnic Institute (RPI) in Troy, New York.
The Rensselaer Space Society is sponsoring the use of campus
facilities and meeting amphitheatres. Seating for up to 300
persons is available for conference sessions and exhibits
will be setup in an adjacent, public access display hall.
Propulsion hardware, literature and other items of interest
will be shown including displays covering high power and
experimental rocketry. Other sponsors of the conference are

the National Space Society and its Northeast Chapters, the International Space University, ETM/Solar Works and Space Delivery Systems.

The theme of this conference will be:
"PROGRESS IN COMMERCIAL SPACE DEVELOPMENT"

The Northeast Space Development Conference's primary goal is to offer a meeting place for people from aerospace companies, universities, organizations, government agencies and other individuals who either contribute, participate or otherwise support Commercial Space Development in the Northeast region and across the United States and Canada. We hope to do our part in the Northeast to assure the continued growth of the Commercial Space Industry by offering a highly visible, technical and business level forum to try and focus more regional and national media attention on commercial space endeavors. We feel it is critical to encourage new commercial space ventures and partnerships. This unique conference will hopefully spawn new business and academic relationships, and provide information on the opportunities for cooperation between established and newer space businesses.

We are looking forward to having you become a regular participant in the Northeast Space Development Conference.

NORTHEAST SPACE DEVELOPMENT CONFERENCE - NSDC '94
Darrin Communications Center, Rensselaer Polytechnic Institute, Troy, NY
PROGRAM, SPEAKERS, TIMES (VER. 1.2)

September 24, 1994

REGISTRATION - (8:00am-9:00am)
Continental Breakfast - Display Hall/Lounge Area (until 8:50am)

INTRODUCTION - (8:55am-9:00am)
Conference Chair - Chris Welty

KEYNOTE ADDRESS - (9:00am-9:30am)

PROGRESS IN COMMERCIAL SPACE DEVELOPMENT
Keynote Speaker - Robert Walker, Rep. - PA *

SESSION I - (9:30am-10:30am)

TECHNOLOGY ACCESS & PAYLOAD PROTECTION

- Al Halstead, Introductions
- NASA's Technology Reinvestment Program
- Glenn Wright, NASA OACT/CTC *
- Satellite & Launch Insurance Update
- Jeffrey S. Cassidy, US Aviation Underwriters

SESSION II - (11:00am-12:00pm)

SMALL LAUNCH VEHICLES & NEW LAUNCH OPTIONS

- Dean Oberg, Introductions
- Hot Topics: Launch Vehicle Options (LLV, SS-25, Orbex)
- Peter Diamandis, CTA, Inc.
- Space Access by Conversion: New Solid Propellant Launchers
- Robert Davis, E'Prime Aerospace Corp. *

LUNCHEON - (12:30pm-1:30pm) (Chris Welty - Introductions)

Luncheon Talk - PROGRESS IN SPACE BUSINESS EDUCATION

Luncheon Speaker - Robert Richards, International Space University

SESSION III - (2:00pm-3:00pm)

EXPERIMENT CARRIERS & MICROGRAVITY RESEARCH

- Al Halstead, Introductions
- Spacehab Progress: Docking Missions to MIR
- David Rossi, Spacehab, Inc.
- Progress in Biotechnology & Crystal Growth Research in Space
- Wesley Hymer, PennState University

SESSION IV - (3:30pm-4:30pm)

PROPULSION SYSTEMS & SOLO SPACEFLIGHT

- Dean Oberg, Introductions
- Rocket Propulsion Progress - Hybrid Technology Option Project
- Brian Hughes, AMROC, Takoma Park, MD Office *
- SPACECUB: A One Passenger Sub-Orbital Rocket
- Geoffrey A. Landis, NASA Lewis Research Center
- and David Burkhead, University of Akron

SESSION V - (5:00pm-6:00pm)

SUNSAT ENERGY & LUNAR COMMERCE

- Gay Canough, Introductions
- Progress in Solar Power Satellites
- Seth Potter, New York University *
- Commercial Lunar Rover - Advanced Robotics
- David Gump, LunaCorp, Arlington, VA

* invited

SPACE ENTREPRENEURS POST CONFERENCE DINNER

As a follow-on function a cocktail half hour and a dinner gathering will be held at the Castaways Restaurant which is across the street from the Super 8 Motel (close to RPI).

COCKTAILS - (6:30pm-7:00pm)

- Cash Bar & opportunity to visit and socialize with other attendees, associates and speakers

INFORMAL "Dutch Treat" DINNER - (7:00pm-?)

- Fine food and discussion of the days events.

NSDC '94 - REGISTRATION FORM

NAME -----

ADDRESS -----

CITY _____ ST ____ ZIP _____

PHONE _____ - _____ - _____

____ Regular \$85 (After 9/1, at door)

____ Advance \$65 (Before 9/1, NSS, AIAA, Tripoli, NAR)

____ Student with ID \$20

(Fees include Luncheon)

Make Check or MO payable to NSDC. Print and mail this form and registration fee to:

NSDC c/o Rensselaer Space Society
RPI
Rensselaer Union, PO Box 86
Troy, NY 12180

For more info:

Call (607) 785-6499
or e-mail to canough@bingvaxa.cc.binghamton.edu

Hotels -

Super 8 (near RPI)	800-800-8000	\$48-\$55/night
Holiday Inn (US 9, 8 mi. S. of Troy)	800-465-4329	\$67/night
The Desmond (near Albany Airport)	800-448-3500	\$119-\$131/night
Marriott Inn (near Albany Airport)	800-228-9290	\$129-\$168/night

(Rates as of 8/19/94, NSDC not responsible for rate changes)

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(Dean R. Oberg)

Date: Mon, 22 Aug 1994 21:39:04 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!csulb.edu!nic-nac.CSU.net!
charnel.ecst.csuchico.edu!csusac!csus.edu!netcom.com!btoback@network.ucsd.edu
Subject: Portable EME Station -- Questions
To: ham-space@ucsd.edu

I hope that one of these will be the correct newsgroup for this question; advice on redirection is welcome.

I'm thinking of assembling a portable EME station that I could use for demonstrations at schools. I don't know if such a thing is possible at any reasonable cost, or for any reasonable definition of "portable." But here are the questions anyway:

1. I assume that because of my Arizona location, I can't use 432MHz. This seemed to be the best compromise between power amplifier practicality and antenna size. Is 23cm a good second choice?
2. Assuming that 23cm is a good second choice, how can I generate the necessary power on that band? I've found one amplifier design, in the 1975 (!) ARRL Handbook. It uses a pair of 3CX100A5 tubes and could be used for 200W continuous or 400W intermittent. Since the antenna will be compromised for

portability's sake (no 24-ft dishes), I'd like to get more power than this. Has the state of the art improved since 1975? If so, where can I find construction information?

3. Various publications have stated that Yagi designs have proven unsatisfactory for EME work at 23cm, but don't say why. I can make guesses (losses in the splitter network, etc.), but don't know for sure. Is it in fact possible to use these for 23cm EME work? A back-of-the-envelope calculation suggests that a 24dBi array could be quite practical, but I haven't considered splitter network losses.
4. If a Yagi array really can't be made practical, does anyone know of some portable dish designs -- 4m or so? The dish doesn't have to be rugged or able to stand up to weather since it will never see a permanent installation.

The objective is a station that can hear its own echoes -- not necessarily with communication-capable quality -- and can communicate with a "big gun" EME station. If my planning is going in a completely fruitless direction for such an objective, I'd like to know early on!

Thanks,
-- Bruce Toback
KN6MN

Date: Mon, 22 Aug 1994 17:31:56 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!europa.eng.gtefsd.com!
howland.reston.ans.net!torn!nott!cunews!freenet.carleton.ca!FreeNet.Carleton.CA!
ae517@network.ucsd.edu
Subject: UoSAT-3
To: ham-space@ucsd.edu

Low Earth Orbit Satellite System used in Voyage to
North Pole - US/Canada Arctic Ocean Section '94

Today, August 22nd, 1994, the USCG icebreaker POLAR SEA and the Canadian CG icebreaker LOUIS S. ST-LAURENT, in conjunction with the Arctic Ocean Section 1994, succeeded in reaching the geographic north pole.

The voyage was conceived to provide support to a joint US/Canada environmental and scientific research program in the Arctic Ocean. The project involves over 60 scientists studying the role of the Arctic Ocean in relation to changes in regional and global climate and

environment. The two vessels left the Chukchi Sea in late July, through areas of the Arctic Ocean that never before had been transited by ship due to the severe sea ice regimes found there.

A number of systems were used in providing communications support to the Canadian icebreaker ST-LAURENT, including a 56Kbp/s INMARSAT link. However, after moving outside of the INMARSAT Pacific Ocean Region satellite footprint at approximately 80 degrees latitude north, it was UoSAT 3 that provided the primary means of transferring ice imagery files so critical to ice navigation. Radio Amateurs will remember UoSAT 3 as UO-14 when it was operated in the Amateur service, where this technology was largely pioneered. We believe this to be the first shipboard application of LEO store-and-forward communications in an operational scenario.

The Canadian Coast Guard would like to thank the Canadian Centre for Marine Communications in St. John's Newfoundland, as well as Satellife of Cambridge, Mass., the Telemedicine Centre of Memorial University of Newfoundland, and the Centre for Satellite Engineering Research of the University of Surrey, U.K. for their support in this program.

tnx de va3rr@amsat.org
Canadian Coast Guard

Date: Mon, 22 Aug 94 09:54:25 -0500
From: news2.near.net!news.delphi.com!usenet@yale.arpa
Subject: Yaesu 2 Meter All-Mode for Sale
To: ham-space@ucsd.edu

FOR SALE:

Yaesu FT-290 RII 2 Meter All-Mode Transceiver
- DTMF Microphone
- 25 Watt Amplifier
- Mobile Mounting Bracket (never installed)

This rig is in perfect condition. I purchased it for

the Spring VHF Sweeps and have used it about 6 times since then. The receiver section and audio on this rig are excellent, and the SSB is exceptionally sweet.

Unfortunately I must part with it for financial reasons.

The first \$450 takes it away.

respond via Email to brunelli_pc@delphi.com

pete brunelli
n1qdq

End of Ham-Space Digest V94 #234
